

## **REMARKS**

An Office Action was mailed December 24, 2008. The response is timely. Any fee due with this paper, including any necessary extension fees, may be charged on Deposit Account 50-1290.

Favorable reconsideration of this application is respectfully requested in view of the foregoing amendments and the following remarks.

### **Summary**

By the foregoing, claims 1, 2, 4, 7, 19, 22, and 23 have been amended. No new matter is added. Claim 6 has been canceled without prejudice or disclaimer of the subject matter contained therein.

Thus, claims 1-2, 4-5, and 7-25 are pending in the present application. Claims 20-21 and 24-25 were withdrawn from consideration and are now cancelled, as requested. Claims 1, 4, 19, 22, and 23 are the independent claims that are being examined.

### **Rejections under 35 U.S.C. §112**

Claims 1-2, 19 and 22 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite for regarding the recitation of the first and second layer. By the foregoing amendments, the claims have been amended to more particularly out and distinctly claim their subject matter. Accordingly, withdrawal of the rejection is respectfully requested.

### **Rejections under 35 U.S.C. §103(a)**

Claims 1-2, 4-19, and 22-23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,934,759 to Hejna in view of U.S. Patent No. 7,254,138 to Sandstrom.

Claims 1-2, 4-19, and 22-23 also stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hejna in view of U.S. Patent No. 7,450,580 to Itonaga.

**With regard to independent claim 1**, claim 1 recites the features of

*“a data generating unit to convert the destination address of the first layer of each copy of the multicast data being the multicast address into a first layer address of a corresponding one of the identified clients so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the destination address of the first layer to forward each copy of the multicast data to the identified one or more clients based on data of the first layer of each copy of the multicast data.”*

As discussed below, at least these features of claim 1 are a distinction over Hejna, and, thus, over its combination with Sandstrom and Itonaga.

In contrast, Hejna merely scratches the surface of the subject and teaches that:

*“In accordance with the present invention, Multicaster 3300 manages a list of all clients that should receive data from particular portions of the TDM composite signal in accordance with any one of a number of methods which are well known to those of ordinary skill in the art. Then, whenever the particular portion of data in the TDM composite signal is received from Work Streamer 3200, Multicaster 3300 sends the particular portion of data to all clients (recipients) in the list who are to receive the particular portion of data (also known as multicasting).” 10:40-50.*

As is evident from the above selection, Hejna merely describes that the Multicaster 3300 performs multicasting. Indeed, the rejection concurs in the deficiency of Hejna, specifically at 4:20-22 of the Office Action, it is acknowledged that

*“Hejna does not teach converting multicast addresses to unicast addresses so that the same number of copies of forwarding data corresponding to the number of unicast addresses can be made and forwarded.”*

Therefore, Hejana does not disclose, suggest or teach the noted features of claim 1. The noted features of claim 1, namely *“a data generating unit to convert the destination address of the first layer of each copy of the multicast data being the multicast address into a first layer address of a corresponding one of the identified clients so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the destination address of the first layer to forward each copy of the multicast data to the identified one or more*

*clients based on data of the first layer of each copy of the multicast data”* are a distinction over Hejna.

In the Abstract, Sandstrom that

*“the invention provides look-up-free and packet-layer-protocol transparent forwarding of multi-protocol packet traffic among Layer-N (N=2 or upper in the ISO OSI model) nodes.”*

Thus, Sandstrom merely discloses forwarding transparently multi-protocol packet traffic among Layer-N nodes. Sandstrom does not disclose, suggest, or teach the noted features of claim 1. Therefore, the previously noted features of claim 1 are a distinction over Sandstrom.

Itonaga teaches at 6:23-26 that

*“[e]ach of the copy entries 42 is information of a next hop node to which a copy of the content data is to be transferred, including at least the IP address of the next hop node or a data receiving host”*

Further, Itonaga teaches at 7:65-8:06 that

*“[t]he data copying section 222 uses the data ID of the received content data to search the copy entry information 40 of the copy entry controller 221 for a root entry 41 and check receiving device information 42 of the root entry 41 (step S21). Thereafter, the data copying section 222 converts the destination IP address of the content data to IP address included in the receiving device information 42 (step S22) and sends the content data as unicast data to the IP address of the receiving device (step S23)”*

As the selection makes clear, Itonaga merely discloses converting the destination IP address of the content data to the IP address of the next hop node. Itonaga does not teach, disclose, or suggest converting the destination address of the first layer of each copy of the multicast data being the multicast address into a first layer address of a corresponding one of the identified clients accommodated by the switch device so that the switching device accommodating the identified one or more clients receives each copy of the multicast data converted the destination address of the first layer to forward each copy of the multicast data to the identified one or more

clients. Thus, Itonaga does not disclose, suggest, or teach the noted features of claim 1. Therefore, the noted features of claim 1 discussed above are a distinction over Itonaga.

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 1 noted above, at least one claimed element is not present in the asserted combination of references. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claim 1. The cited references fail to fill the gap or permit one skilled in the art to adapt the other references to a different outcome.

Claim 2 ultimately depend from claim 1 and so at least similarly distinguish over the asserted combination of references.

Accordingly, the Examiner is respectfully requested to withdraw the rejection.

**With regard to independent claim 4**, claim 4 recites features of

*“a data generating unit to convert the MAC destination address of each copy of the multicast data being the multicast MAC address into a unicast MAC address of a corresponding one of the identified clients as a destination address of the layer 2 of the data so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the MAC destination address to forward each copy of the multicast data to the identified one or more clients based on data of the layer 2 of each copy of the multicast data”.*

As will be explained below, at least these features of claim 4 are a distinction over Hejna, and, thus, over its combination with Sandstrom and Itonaga.

Hejna merely describes Multicaster 3300 performs multicasting 10:40-50. Indeed, the rejection concurs in the deficiency of Hejna, specifically at 4:20-22 of the Office Action, it is acknowledged that

*“Hejna does not teach converting multicast addresses to unicast addresses so that the same number of copies of forwarding data corresponding to the number of unicast addresses can be made and forwarded.”*

Therefore, Hejna does not disclose, suggest or teach the noted features of claim 4. The noted features of claim 4, namely *“a data generating unit to convert the MAC destination address of each copy of the multicast data being the multicast MAC address into a unicast MAC address of a corresponding one of the identified clients as a destination address of the layer 2 of the data so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the MAC destination address to forward each copy of the multicast data to the identified one or more clients based on data of the layer 2 of each copy of the multicast data”* are a distinction over Hejna.

Sandstrom merely discloses forwarding transparently multi-protocol packet traffic among Layer-N nodes (see abstract). Sandstrom does not disclose, suggest, or teach the noted features of claim 4. Therefore, the noted features of claim 4, namely *“a data generating unit to convert the MAC destination address of each copy of the multicast data being the multicast MAC address into a unicast MAC address of a corresponding one of the identified clients as a destination address of the layer 2 of the data so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the MAC destination address to forward each copy of the multicast data to the identified one or more clients based on data of the layer 2 of each copy of the multicast data”* are a distinction over Sandstrom.

Itonaga merely discloses converting the destination IP address of the content data to the IP address of the next hop node. Please see 6:23-26,7:65-8:6. Itonaga does not teach, disclose, or suggest converting the MAC destination address of each copy of the multicast data being multicast MAC address to into an unicast MAC address of a corresponding one of the identified clients accommodated by the switch device so that the switching device accommodating the identified one or more clients receives each copy of the multicast data converted the MAC destination address to forward each copy of the multicast data to the identified one or more clients. Itonaga et al. do not disclose, suggest, or teach the noted features of claim 4. Therefore, the noted features of claim 4 discussed above are a distinction over Itonaga.

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 4 noted above, at least one claimed element is not present in the asserted combination of references. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claim 4. The cited references fail to fill the gap or permit one skilled in the art to adapt the other references to a different outcome.

Claim 5 and 7-18 ultimately depend from claim 4, respectively, and so at least similarly distinguish over the asserted combination of references.

Accordingly, the Examiner is respectfully requested to withdraw the rejection.

**With reference to independent claim 19**, claim 19 recites features of

*“a data generating unit to convert the destination address of the second layer of each copy of the multicast data being the multicast address into an address of the client desiring to receive the multicast data, on the basis of the data relating to one or more clients that have been stored in said storage unit so that one or more second layer switches device receive each copy of the multicast data converted the destination address of the second layer to forward each copy of the multicast data to one or more clients based on data of the second layer of each copy of the multicast data.”*

As will be explained below, at least these features of claim 19 are a distinction over Hejna, and, thus, over its combination with Sandstrom and Itonaga.

Hejna merely describes Multicaster 3300 performs multicasting 10:40-50. Indeed, the rejection concurs in the deficiency of Hejna, specifically at 4:20-22 of the Office Action, it is acknowledged that

*“Hejna does not teach converting multicast addresses to unicast addresses so that the same number of copies of forwarding data corresponding to the number of unicast addresses can be made and forwarded.”*

Therefore, Hejana does not disclose, suggest or teach the noted features of claim 19. The noted features of claim 19, namely *“a data generating unit to convert the destination address of the*

*second layer of each copy of the multicast data being the multicast address into an address of the client desiring to receive the multicast data, on the basis of the data relating to one or more clients that have been stored in said storage unit so that one or more second layer switches device receive each copy of the multicast data converted the destination address of the second layer to forward each copy of the multicast data to one or more clients based on data of the second layer of each copy of the multicast data”* are a distinction over Hejna.

Sandstrom merely discloses forwarding transparently multi-protocol packet traffic among Layer-N nodes (see abstract). Sandstrom does not disclose, suggest, or teach the noted features of claim 19. Therefore, the noted features of claim 19, namely are a distinction over Sandstrom.

Itonaga merely discloses converting the destination IP address of the content data to the IP address of the next hop node. Please see 6:23-26, 7:65-8:06. Itonaga does not teach, disclose, or suggest converting the destination address of the second layer of each copy of the multicast data being the multicast address into an address of the client desiring to receive the multicast data so that one or more second layer switches device accommodating the client receive each copy of the multicast data converted the destination address of the second layer to forward each copy of the multicast data to one or more clients. Itonaga does not disclose, suggest, or teach the noted features of claim 19. Therefore, the noted features of claim 19 discussed above are a distinction over Itonaga.

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 19 noted above, at least one claimed element is not present in the asserted combination of references. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claim 19. The cited references fail to fill the gap or permit one skilled in the art to adapt the other references to a different outcome.

Accordingly, the Examiner is respectfully requested to withdraw the rejection.

**With regard to independent claim 22**, claim 22 recites features of

*“converting the destination address of the first layer of each copy of the multicast data being the multicast address into an first layer address of a corresponding one of the identified clients so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the destination address of the first layer to forward each copy of the multicast data to the identified one or more clients based on data of the first layer of each copy of the multicast data”.*

As will be explained below, at least these features of claim 22 are a distinction over Hejna, and thus over its combination with Sandstrom and Itonaga.

In contrast, Hejna merely scratches the surface of the subject and teaches that:

*“In accordance with the present invention, Multicaster 3300 manages a list of all clients that should receive data from particular portions of the TDM composite signal in accordance with any one of a number of methods which are well known to those of ordinary skill in the art. Then, whenever the particular portion of data in the TDM composite signal is received from Work Streamer 3200, Multicaster 3300 sends the particular portion of data to all clients (recipients) in the list who are to receive the particular portion of data (also known as multicasting).” 10:40-50.*

As is evident from the above selection, Hejna merely describes that the Multicaster 3300 performs multicasting. Indeed, the rejection concurs in the deficiency of Hejna, specifically at 4:20-22 of the Office Action, it is acknowledged that

*“Hejna does not teach converting multicast addresses to unicast addresses so that the same number of copies of forwarding data corresponding to the number of unicast addresses can be made and forwarded.”*

Therefore, Hejana does not disclose, suggest or teach the noted features of claim 22. The noted features of claim 22, namely *“converting the destination address of the first layer of each copy of the multicast data being the multicast address into an first layer address of a corresponding one of the identified clients so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the destination address of the first layer to forward each copy of the multicast data to the identified one or more clients based on data of the first layer of each copy of the multicast data”*, are a distinction over Hejna.



Sandstrom merely discloses forwarding transparently multi-protocol packet traffic among Layer-N nodes. Please see Abstract. Sandstrom does not disclose, suggest, or teach the noted features of claim 22. Therefore, the noted features of claim 22 discussed above are a distinction over Sandstrom.

Itonaga merely discloses converting the destination IP address of the content data to the IP address of the next hop node. Please see 6:23-26, 7:65-8:06. Itonaga does not teach, disclose, or suggest converting the destination address of the first layer of each copy of the multicast data being the multicast address into a first layer address of a corresponding one of the identified clients accommodated by the switch device so that the switching device accommodating the identified one or more clients receives each copy of the multicast data converted the destination address of the first layer to forward each copy of the multicast data to the identified one or more clients. Itonaga does not disclose, suggest, or teach the noted features of claim 22. Therefore, the noted features of claim 22 discussed above are a distinction over Itonaga et al.

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 22 noted above, at least one claimed element is not present in the asserted combination of references. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claim 22. The cited references fail to fill the gap or permit one skilled in the art to adapt the other references to a different outcome.

Accordingly, the Examiner is respectfully requested to withdraw the rejection.

**With regard to independent claim 23**, claim 23 recites features of

*“converting the MAC destination address of each copy of the multicast data being the multicast MAC address into an unicast MAC address of a corresponding one of the identified clients as a destination address of the layer 2 of the data so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the MAC destination address to forward each copy of the multicast data to the identified one or more clients based on data of the layer 2 of each copy of the multicast data.”*

As will be explained below, at least these features of claim 23 are a distinction over Hejna, and thus over its combination with Sandstrom and Itonaga.

In contrast, Hejna merely scratches the surface of the subject and teaches that:

*“In accordance with the present invention, Multicaster 3300 manages a list of all clients that should receive data from particular portions of the TDM composite signal in accordance with any one of a number of methods which are well known to those of ordinary skill in the art. Then, whenever the particular portion of data in the TDM composite signal is received from Work Streamer 3200, Multicaster 3300 sends the particular portion of data to all clients (recipients) in the list who are to receive the particular portion of data (also known as multicasting).” 10:40-50.*

As is evident from the above selection, Hejna merely describes that the Multicaster 3300 performs multicasting. Indeed, the rejection concurs in the deficiency of Hejna, specifically at 4:20-22 of the Office Action, it is acknowledged that

*“Hejna does not teach converting multicast addresses to unicast addresses so that the same number of copies of forwarding data corresponding to the number of unicast addresses can be made and forwarded.”*

Therefore, Hejana does not disclose, suggest or teach the noted features of claim 23. The noted features of claim 23, namely “converting the MAC destination address of each copy of the multicast data being the multicast MAC address into an unicast MAC address of a corresponding one of the identified clients as a destination address of the layer 2 of the data so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the MAC destination address to forward each copy of the multicast data to the identified one or more clients based on data of the layer 2 of each copy of the multicast data”, are a distinction over Hejna.

Sandstrom merely discloses forwarding transparently multi-protocol packet traffic among Layer-N nodes. Please see Abstract. Sandstrom does not disclose, suggest, or teach the noted features of claim 23. Therefore, the noted features of claim 23, namely “converting the MAC destination address of each copy of the multicast data being the multicast MAC address into an unicast MAC

*address of a corresponding one of the identified clients as a destination address of the layer 2 of the data so that a switching device accommodating the identified one or more clients receives each copy of the multicast data converted the MAC destination address to forward each copy of the multicast data to the identified one or more clients based on data of the layer 2 of each copy of the multicast data”* are a distinction over Sandstrom.

Itonaga merely discloses converting the destination IP address of the content data to the IP address of the next hop node. Please see 6:23-26, 7:65-8:06. Itonaga does not teach, disclose, or suggest converting the MAC destination address of each copy of the multicast data being multicast MAC address to into an unicast MAC address of a corresponding one of the identified clients accommodated by the switch device so that the switching device accommodating the identified one or more clients receives each copy of the multicast data converted the MAC destination address to forward each copy of the multicast data to the identified one or more clients. Itonaga et al. do not disclose, suggest, or teach the noted features of claim 23. Therefore, the noted features of claim 23 are a distinction over Itonaga et al.

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 23 noted above, at least one claimed element is not present in the asserted combination of references. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claim 23. The cited references fail to fill the gap or permit one skilled in the art to adapt the other references to a different outcome.

Accordingly, the Examiner is respectfully requested to withdraw the rejection.

In view of the foregoing discussion, the rejection of claims 1-2, 4-5, 7-19, and 22-23 is improper. Accordingly, withdrawal of the rejection is respectfully requested. All dependent claims are allowable for at least the same reasons as the independent claim from which they depend.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,

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CUSTOMER NUMBER 026304  
Docket No.: FUJY 20.944 (100794-00552)